

FORM PTO 1390  
(REV 5-93)

US DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

ATTORNEY DOCKET NUMBER  
2006 0286ATRANSMITTAL LETTER TO THE UNITED STATES  
DESIGNATED/ELECTED OFFICE (DO/EO/US)  
CONCERNING A FILING UNDER 35 U.S.C. §371U.S. APPLICATION NO.  
(if known, see 37 CFR 1.5)  
10/570,133International Application No.  
PCT/JP2004/012638International Filing Date  
September 1, 2004Priority Date Claimed  
September 1, 2003**Title of Invention**

BETA-HYDROXY SHORT TO MEDIUM CHAIN FATTY ACID POLYMER

**Applicant(s) For DO/EO/US**

Kazunari USHIDA and Masaki KURIYAMA

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. ☐ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. §371.
2. ☒ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. §371.
3. ☐ This express request to begin national examination procedures (35 U.S.C. §371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. §371(b) and PCT Articles 22 and 39(1).
4. ☐ A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.
5. ☐ A copy of the International Application as filed (35 U.S.C. §371(c)(2))
  - a. ☐ is transmitted herewith (required only if not transmitted by the International Bureau).
  - b. ☐ has been transmitted by the International Bureau.
  - c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US)
6. ☐ A translation of the International Application into English (35 U.S.C. §371(c)(2)).
7. ☐ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. §371(c)(3)).
  - a. ☐ are transmitted herewith (required only if not transmitted by the International Bureau).
  - b. ☐ have been transmitted by the International Bureau.
  - c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
  - d. ☐ have not been made and will not be made.
8. ☐ A translation of the amendments to the claims under PCT Article 19.
9. ☐ An oath or declaration of the inventor(s) (35 U.S.C. §371(c)(4)).
10. ☐ A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. §371(c)(5)).

**Items 11. to 14. below concern other document(s) or information included:**

11. ☒ An Information Disclosure Statement under 37 CFR 1.97 and 1.98. **ATTACHMENT J**
12. ☐ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
13. ☐ A FIRST preliminary amendment.  
☐ A SECOND or SUBSEQUENT preliminary amendment.
14. ☐ Other items or information:

<b>U.S. APPLICATION NO.</b> (if known, see 37 CFR 1.5) 10/570,133		<b>INTERNATIONAL APPLICATION NO.</b> PCT/JP2004/012638		<b>ATTORNEY'S DOCKET NO.</b> 2006_0286A	
15. <input type="checkbox"/> The following fees are submitted				<b>CALCULATIONS</b>	<b>PTO USE ONLY</b>
Basic National Stage Fee ..... \$300.00 National Stage Search Fee (International Search Report provided - 37 CFR 1.492(b)(2)) ..... \$400.00 National Stage Examination Fee ..... \$200.00 Specification/drawings in excess of 100 pages (units of 50 x \$250.00) = ..... \$					
<b>ENTER APPROPRIATE BASIC FEE AMOUNT =</b>					
Surcharge of \$130.00 for furnishing the oath or declaration later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(e)).				\$	
Claims	Number Filed	Number Extra	Rate		
Total Claims	- 20 =		X \$50.00	\$	
Independent Claims	- 3 =		X \$200.00	\$	
Multiple dependent claim(s) (if applicable)			+ \$360.00	\$	
<b>TOTAL OF ABOVE CALCULATIONS =</b>				\$0	
<input type="checkbox"/> Small Entity Status is hereby asserted. Above fees are reduced by 1/2.				\$	
<b>SUBTOTAL =</b>				\$0	
Processing fee of \$130.00 for furnishing the English translation later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(f)).				+	\$
<b>TOTAL NATIONAL FEE =</b>				\$	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40 per property +				\$	
<b>TOTAL FEES ENCLOSED =</b>				\$0	
				Amount to be refunded	\$
				Amount to be charged	\$
a. <input type="checkbox"/> A check in the amount of \$ to cover the above fees is enclosed. A duplicate copy of this form is enclosed. b. <input type="checkbox"/> Please charge my Deposit Account No. 23-0975 in the amount of \$ to cover the above fees. A duplicate copy of this sheet is enclosed. c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 23-0975.					
<b>NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.</b>					
19. CORRESPONDENCE ADDRESS   <div style="text-align: center; font-size: 1.2em;">             CUSTOMER NO.  <b>000513</b> </div>			By: <u>Matthew M. Jacob</u> Matthew M. Jacob, Registration No. 25,154  WENDEROTH, LIND & PONACK, L.L.P. 2033 "K" Street, N.W., Suite 800 Washington, D.C. 20006-1021 Phone: (202) 721-8200 Fax: (202) 721-8250  <div style="text-align: right;">June 12, 2006</div>		

[CHECK NO. \_\_\_\_\_]  
 [2006\_0286A]

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of :  
Kazunari USHIDA et al. : **Mail Stop: PCT**  
Serial No. 10/570,133 : Attorney Docket No. 2006\_0286A  
Filed March 1, 2006 :

BETA-HYDROXY SHORT TO MEDIUM  
CHAIN FATTY ACID POLYMER  
[Corresponding to PCT/JP2004/012638  
Filed September 1, 2004]

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**INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Pursuant to the provisions of 37 CFR 1.56, 1.97 and 1.98, Applicants request consideration of the references listed on attached form PTO-1449 and any additional information identified below in paragraph 3. A legible copy of each reference listed on the Form PTO-1449 is enclosed, except a copy is not provided for:

- ☒ each U.S. Patent and U.S. Patent application publication;
- ☐ each reference previously cited in the international application  
PCT/\_\_\_\_\_; and/or
- ☐ each reference previously cited in prior parent application Serial No.  
\_\_\_\_\_.

1a. ☒ This Information Disclosure Statement is submitted:

within three months of the filing date (or of entry into the National Stage) of the  
above-entitled application, **or**

before the mailing of a first Office Action on the merits or the mailing of a first Office Action after the filing of an RCE,

**and thus no certification and/or fee is required.**

1b. ☐ This Information Disclosure Statement is submitted

after the events of above paragraph 1a and prior to the mailing date of a final Office Action or a Notice of Allowance or an action which otherwise closes prosecution in the application, and thus:

(1) ☐ the certification of paragraph 2 below is provided, **or**

(2) ☐ the fee of \$180.00 specified in 37 CFR 1.17(p) is enclosed.

1c. ☐ This Information Disclosure Statement is submitted:

after the mailing date of a final Office Action or Notice of Allowance or action which otherwise closes prosecution in the application, and prior to payment of the issue fee, and thus:

**the certification of paragraph 2 below is provided, and**

**the fee of \$180.00 specified in 37 CFR 1.17(p) is enclosed.**

2. It is hereby certified

a. ☐ that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the Statement, or


b. ☐ that no item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the person signing the certification after making reasonable inquiry, was known to any individual designated in §1.56(c) more than three months prior to the filing of the Statement.

3. ☐ Consideration of the following list of additional information (including any copending or abandoned U.S. application, prior uses and/or sales, etc.) is requested.
4. For each non-English language reference listed on the attached form PTO-1449, reference is made to:
- a. ☐ a full or partial English language translation submitted herewith,
  - b. ☐ a foreign patent office search report (in the English language) submitted herewith,
  - c. ☒ the concise explanation contained in the specification of the present application at pages 1 to 27,  
  
Reference DB (Brune et al.) is discussed on page 11 of the specification.
  - d. ☐ the concise explanation set forth in the attached English language abstract,
  - e. ☐ the concise explanation set forth below or on a separate sheet attached to the reference:
5. ☐ A foreign patent office search report citing one or more of the references is enclosed.

Respectfully submitted,

Kazunari USHIDA et al.

By

  
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June 12, 2006

## INFORMATION DISCLOSURE STATEMENT

FORM PTO 1449 (modified)

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICELIST OF REFERENCES CITED BY APPLICANT(S)  
(Use several sheets if necessary)

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March 1, 2006

GROUP

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO	
	AA	92/09211	06/1992	WO				
	AB	99/34687	07/1999	WO				
	AC	83/00435	02/1983	WO				

## OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)

	AD	Cook, S. et al., <i>Aliment. Pharmacol. Ther.</i> , Vol. 12, pp. 499 to 507 (1998).
	AE	Hara, H., <i>Bioscience Microflora</i> , Vol. 21, No. 1, pp. 35 to 42 (2002).
	AF	Andoh, A. et al., <i>Current Pharmaceutical Design</i> , Vol. 9, pp. 347 to 358 (2003).
	AG	Harig, J. et al., <i>The New England Journal of Medicine</i> , Vol. 320, No. 1, pp. 23 to 28 (1989).
	AH	Head, K. et al., <i>Alternative Medicine Review</i> , Vol. 8, No. 3, pp. 247 to 283 (2003).
	AI	Goh, J. et al., <i>Aliment. Pharmacol. Ther.</i> , Vol. 17, pp. 307 to 320 (2003).
	AJ	Hong, J. et al., <i>Aliment. Pharmacol. Ther.</i> , Vol. 15, pp. 1253 to 1262 (2001).
	AK	Jacobasch, G. et al., <i>Int. J. Colorectal Dis.</i> , Vol. 14, pp. 201 to 211 (1999).
	AL	Andoh, A. et al., <i>JPEN, Journal of Parenteral and Enteral Nutrition</i> , Vol. 23, No. 5, pp. S70 to S73 (1999).
	AM	Kanauchi, O. et al., <i>Journal of Gastroenterology and Hepatology</i> , Vol. 14, pp. 880 to 888 (1999).

EXAMINER

DATE CONSIDERED

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include cop. this form with next communication to applicant.

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## OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)

BA	Wächtershäuser, A. et al., <i>Eur. J. Nutr.</i> , Vol. 39, pp. 164 to 171 (2000).
BB	Welters, C. et al., <i>Dis. Colon Rectum</i> , Vol. 45, No. 5, pp. 621 to 627 (2002).
BC	Mortensen, F., et al., <i>J. Gastroenterology</i> , Vol. 31, pp. 302 to 303 (1996).
BD	Vernia, P. et al., <i>The Lancet</i> , Vol. 356, pp. 1232 to 1235 (2000).
BE	Rabbani, G. et al., <i>The Journal of Infectious Diseases</i> , Vol. 179, pp. 390 to 397 (1999).
BF	Rahman et al., <i>Gastroenterology</i> , Vol. 112, No. 4, A2 (1997).
BG	Ramakrishna, B.S. et al., <i>Gut</i> , Vol. 34, pp. 1215 to 1218 (1993).
BH	Rabbani, G. et al., <i>Gastroenterology</i> , Vol. 121, pp. 554 to 560 (2001).
BI	Ramakrishna, B.S., <i>The New England Journal of Medicine</i> , Vol. 342, No. 5, pp. 308 to 313 (2000).
BJ	Kanauchi, O. et al., <i>Biosci. Biotechnol. Biochem.</i> , Vol. 62, No. 9, pp. 1788 to 1790 (1998).
BK	Chen, H. et al., <i>Nutrition Research</i> , Vol. 20, No. 12, pp. 1725 to 1733 (2000).
BL	Chen, H. et al., <i>Journal of the American College of Nutrition</i> , Vol. 20, No. 1, pp. 44 to 49 (2001).
BM	Parisi, G. C., <i>Digestive Diseases and Sciences</i> , Vol. 47, No. 8, pp. 1697 to 1704 (2002).

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	CA	Bijkerk, C., <i>Aliment Pharmacol. Ther.</i> , Vol. 19, pp. 245 to 251 (2004).
	CB	Fiordaliso, M. et al., <i>Lipids</i> , Vol. 30, No. 2, pp. 163 to 167 (1995).
	CC	Delzenne, N. et al., <i>Am. J. Clin. Nutr.</i> , Vol. 73, pp. 456S to 458S (2001).
	CD	Marcil, V. et al. <i>J. Nutr.</i> , Vol. 133, pp. 2180 to 2183 (2003).
	CE	McIntyre, A. et al. <i>Gut</i> , Vol. 34, pp. 386 to 391 (1993).
	CF	Perrin, P. et al., <i>Gut</i> , Vol. 48, pp. 53 to 61 (2001).
	CG	D'Argenio, G. et al., <i>Gastroenterology</i> , Vol. 110, pp. 1727 to 1734 (1996).
	CH	Leschelle, X. et al., <i>Eur. J. Biochem.</i> , Vol. 267, pp. 6435 to 6442 (2000).
	CI	Augenlicht, L. et al., <i>Cancer Research</i> , Vol. 59, pp. 6005 to 6009 (1999).
	CJ	Heerdt, B. et al., <i>Cancer Research</i> , Vol. 54, pp. 3288 to 3294 (1994).
	CK	Heerdt, B. et al., <i>The Journal of Biological Chemistry</i> , Vol. 266, No. 28, pp. 19120 to 19126 (1991).
	CL	Pouillart, P., <i>Life Sciences</i> , Vol. 63, No. 20, pp. 1739 to 1760 (1998).
	CM	Anderson, A., <i>Microbiological Reviews</i> , Vol. 54, No. 4, pp. 450 to 472.
EXAMINER		DATE CONSIDERED

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## OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)

DA	Lee, S., <i>Biotechnology and Bioengineering</i> , Vol. 49, pp. 1 to 14 (1996).
DB	Brune, V. et al., <i>Z. Tierphysiol., Tierenährg. u. Futtermittelkde.</i> , Vol. 38, pp. 81 to 93 (1977).
DC	Forni, D. et al., <i>Ann. Zootech.</i> , Vol. 48, pp. 163 to 171 (1999).
DD	Forni, D. et al., <i>J. Anim. Physiol. A. Anim. Nutr.</i> , Vol. 81, pp. 31 to 40 (1999).
DE	Forni, D. et al., <i>J. Anim. Physiol. A. Anim. Nutr.</i> 81, pp. 41 to 50 (1999).
DF	Embleton, J. et al., <i>J. Microencapsulation</i> , Vol. 9, No. 1, pp. 73 to 87 (1992).
DG	Kusaka, S. et al., <i>Appl. Microbiol. Biotechnol.</i> , Vol. 47, pp. 140 to 143 (1997).
DH	McBee, R., <i>The Journal of Experimental Zoology Supplement</i> , Vol. 3, pp. 55 to 60 (1989).
DI	Stevens, C. et al., <i>Physiological Reviews</i> , Vol. 78, No. 2, pp. 393 to 427 (1998).
DJ	Marounek, M. et al., <i>Physiol. Res.</i> , Vol. 47, pp. 259 to 263 (1998).
DK	Jamroz, D. et al., <i>Comparative Biochemistry and Physiology Part A</i> , Vol. 131, pp. 657 to 668 (2002).
DL	Kihara, M. et al. <i>Comparative Biochemistry and Physiology Part A</i> , Vol. 132, pp. 333 to 340 (2002).
DM	Mountfort, D. et al., <i>Applied and Environmental Microbiology</i> , Vol. 68, No. 3, pp. 1374 to 1380 (2002).

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## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	EA	4,663,308	05/1987	Saffran et al.			

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
	EB	H11-092552	04/1999	JP			abstract only
	EC	H06-179618	06/1994	JP			abstract only
	ED	H10-324642	12/1998	JP			abstract only
	EE	2000-143538	05/2000	JP			abstract only

## OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)

	EF	Slater, S.C. et al., <i>Journal of Bacteriology</i> , Vol. 170, No. 10, pp. 4431 to 4436 (1988).
	EG	Schubert, P. et al., <i>Journal of Bacteriology</i> , Vol. 170, No. 12, pp. 5837 to 5847 (1988).
	EH	Poirier, Y. et al., <i>Science</i> , Vol. 256, pp. 520 to 523 (1992).
	EI	Younes, H. et al., <i>The Journal of Nutrition</i> , Vol. 125, No. 4, pp. 1010 to 1016 (1995).
	EJ	Okayasu, I. et al., <i>Gastroenterology</i> , Vol. 98, pp. 694 to 702 (1990).
	EK	Tanaka, Y. et al., <i>Eur. J. Biochem.</i> , Vol. 118, pp. 177 to 182 (1981).
	EL	Mochizuki, M. et al., <i>Polymers for Advanced Technologies</i> , Vol. 8, pp. 203 to 209 (1996).

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